

In the Claims

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3. A printed circuit board having improved soldering characteristics, comprising: a substrate having top and bottom surfaces each with an electrically conductive pattern formed thereon; a plurality of through-holes extending through the substrate from the top surface thereof to the bottom surface thereof; each through-hole having a solder station associated therewith on at least the bottom surface of the substrate; and each through-hole having a plurality of spacer pads oriented around the perimeter thereof on the top surface of the substrate, each spacer pad having a top surface raised above the top surface of the substrate, and all of the top surfaces of the spacer pads lying in substantially the same plane.

A| 4. The printed circuit board having improved soldering characteristics as defined in claim 3, wherein the plurality of spacer pads oriented around the perimeter of each through-hole are three in number.

5. In combination:

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- a. a printed circuit board having a top surface and a bottom surface each with an electrically conductive pattern thereon; a plurality of through-holes extending through the printed circuit board from the top surface thereof to the bottom surface thereof, each through-hole having a solder station associated therewith on at least the bottom surface of the printed circuit board, and each through-hole having a plurality of spacer pads oriented around the perimeter thereof on the top surface of the printed circuit board, each spacer pad having a top surface raised above the top surface of the printed circuit board, and the top surfaces of the spacer pads all lying in substantially the same plane; and,
 - b. a component of the type having leads; the component having a lower surface seated upon the top surfaces of the spacer pads, and the leads of the component being received in the through-holes of the printed circuit board, extending through the through-holes of the printed circuit board, and being soldered to the solder stations associated with the through-holes on the bottom surface of the printed circuit board; the spacer pads serving to space the bottom surface of the component a distance above the top surface of the printed circuit board sufficient to allow gasses generated during soldering of the component leads to the solder stations to escape from beneath the component and vent to the atmosphere, and to provide air flow for cooling of the component during operation.

6. The combination as defined in claim 5, wherein the plurality of spacer pads oriented around the perimeter of each through-hole are three in number.
